



Influenza Surveillance Weekly Report

CDC MMWR Week 05, January 29 to February 4, 2017

Summary

The Houston Health Department (HHD) conducts seasonal influenza surveillance from October (week 40) 2016 to May (week 22) 2017. Flu activity typically peaks between December and February. Flu vaccine is recommended for individuals that are 6 months and older.

During January 29 to February 4, 2017, Influenza Like Illness activity from hospital emergency centers remained the same and school settings decreased by a count of 24 compared to the previous week. Clinical laboratory positives decreased by a count of 27 from the previous week.

Influenza activity in Houston is increasing and expected to continue increasing as the season progresses. Flu activity typically peaks between December and February. Cumulatively this season Influenza A (73%) and Influenza B (27%) lab positives have been reported by clinical labs. Public health laboratory testing of surveillance specimens detected the following influenza viruses: Influenza A/H3, Influenza pdm2009, Influenza B / Yamagata, Influenza B / Victoria.

Institutional outbreaks are lab confirmed outbreaks in a nursing home, hospital, prison, school, etc. In January 2017, the Bureau of Epidemiology investigated 2 institutional outbreaks associated with Influenza A.



Influenza Like Illness (ILI)

Influenza Like Illness (ILI) is monitored with several data sources. A description of each surveillance activity, including the definition for ILI, can be found in the components section of this report. Each of the following plots corresponds to a different surveillance system. ILI activity is reported in percent per week.

Table .Summary of ILI activity per week and surveillance activity

Date range		Influenza Like Illness		
Date	MMWRYrWk	Hospital Emergency Center (% per week)	Athena (% per week)	Flu Near You (% per week)
November 27 to December 3, 2016	201648	1.3	0.1	0.0
December 4 to 10, 2016	201649	1.3	0.1	0.0
December 11 to 17, 2016	201650	2.2	0.2	0.0
December 18 to 24, 2016	201651	1.6	0.3	0.0
December 25 to 31, 2016	201652	1.6	0.2	0.0
January 1 to 7, 2017	201701	1.6	0.2	0.0
January 8 to 14, 2017	201702	1.3	0.3	3.4
January 15 to 21, 2017	201703	1.4	0.3	0.0
January 22 to January 28, 2017	201704	1.6	0.2	0.9
January 29 to February 4, 2017	201705	1.6	0.4	6.4

Hospital emergency centers (EC) visits for ILI represent individuals whose symptoms were severe enough to warrant a visit to an EC. Hospitals transmit data to the syndromic surveillance system at the Houston Health Department on a real-time basis.

From January 29 to February 4, 2017, ILI accounted for 1.6% of EC visits which was below this season's threshold. There were a total of 282 hospital EC visits for ILI. The age group(s) that accounted for the highest count(s) of ILI among all hospital EC visits were the 05 to 25 year old age group with 111 hospital EC visits.

The highest percent of ILI (2.2%) occurred from December 11 to 17, 2016.



Figure. Percent ILI related visits to hospital EC per week, 2016-2017

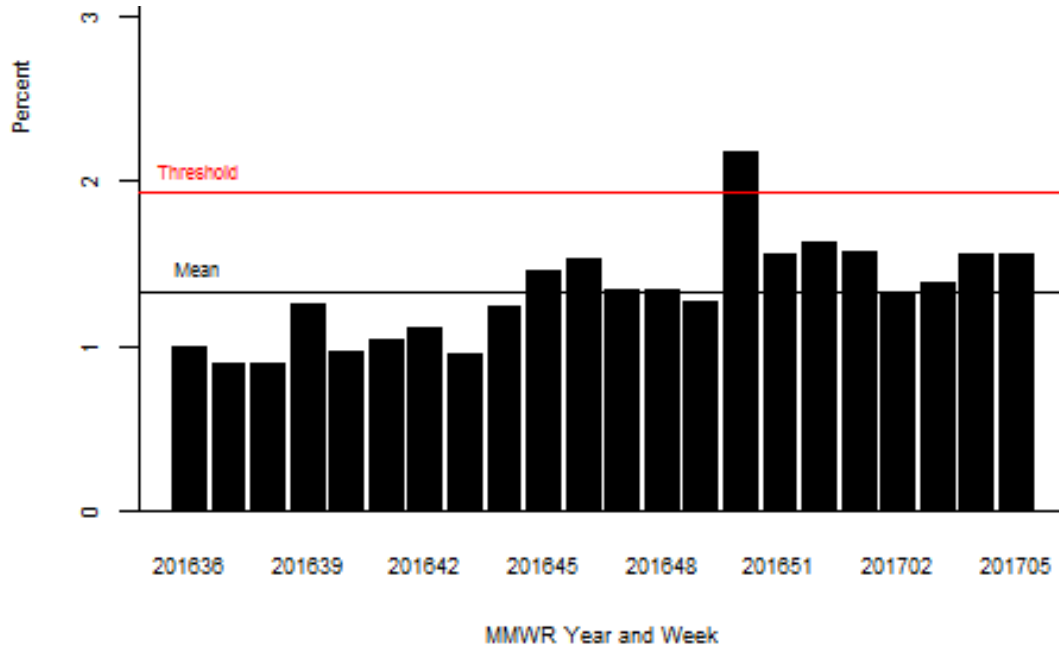
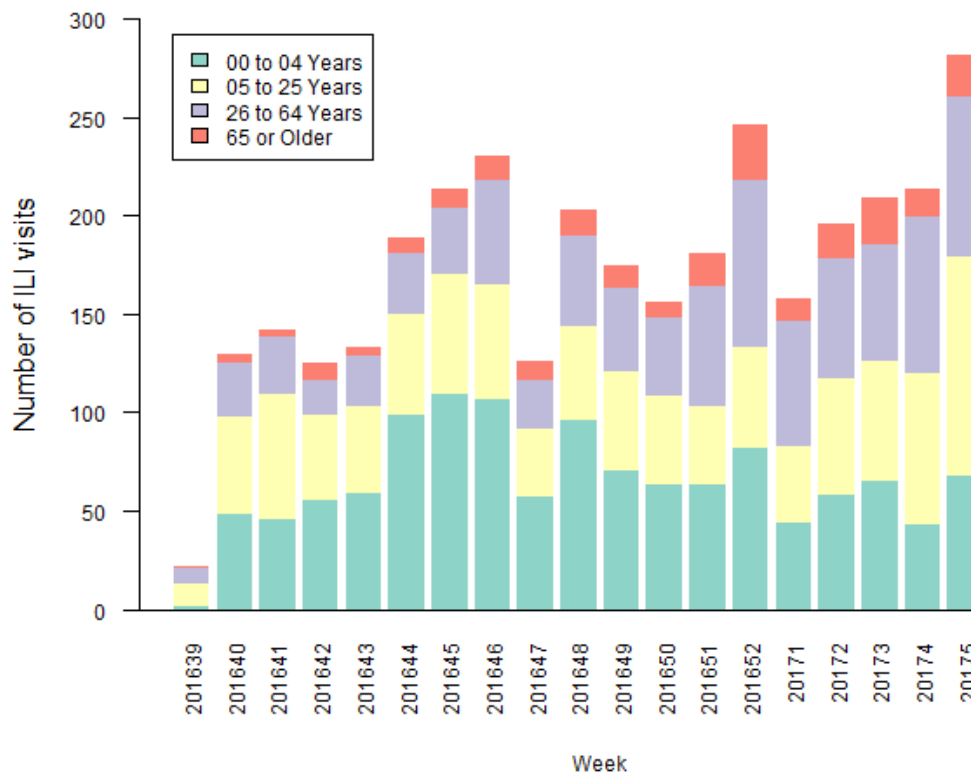


Figure. Number of ILI related visits to hospital EC by age group per week, 2016-2017





Outpatient visits for ILI represent individuals whose symptoms require a visit to a healthcare provider. ILI activity in outpatient settings is obtained on a weekly basis from ILINet and Athena. The last page describes how healthcare providers can participate in ILInet.

From January 29 to February 4, 2017, ILI accounted for 0.4% of outpatient visits in the Athena network. The age group(s) that accounted for the highest count(s) of ILI outpatient visits was the 18 to 49 age group (10).

The highest percent of ILI (0.4%) in outpatient settings occurred from January 29 to February 4, 2017.

Figure. Athena: Percent ILI related visits to outpatient settings per week, 2016-2017

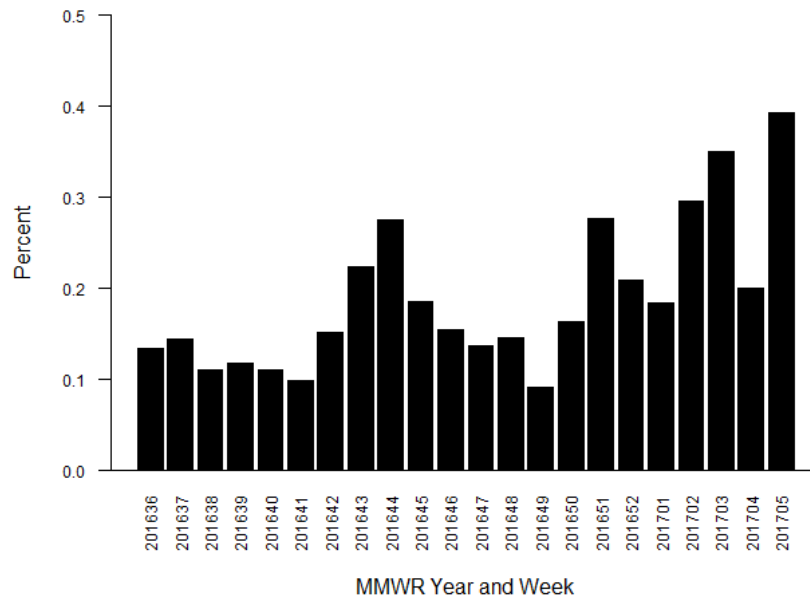
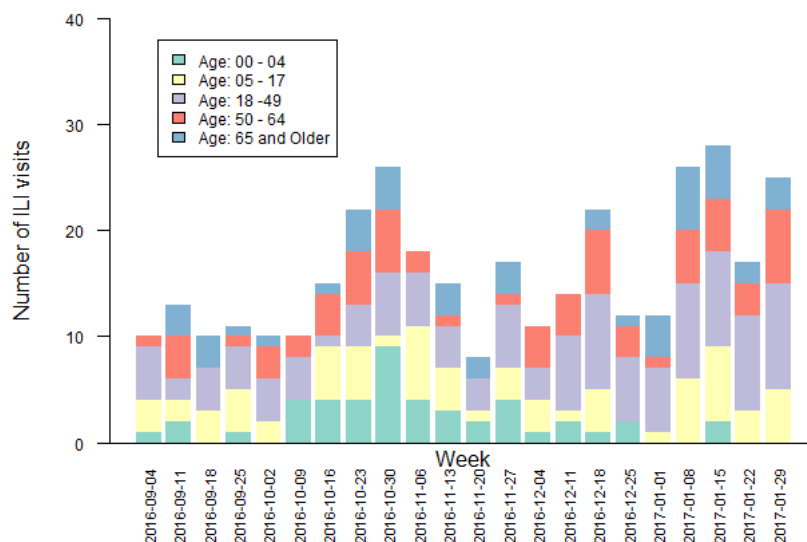


Figure. Athena: Total number of weekly ILI visits to outpatient settings by age group





ILInet participation in Houston is low at this time. Please see the last page for information on how healthcare providers can participate.

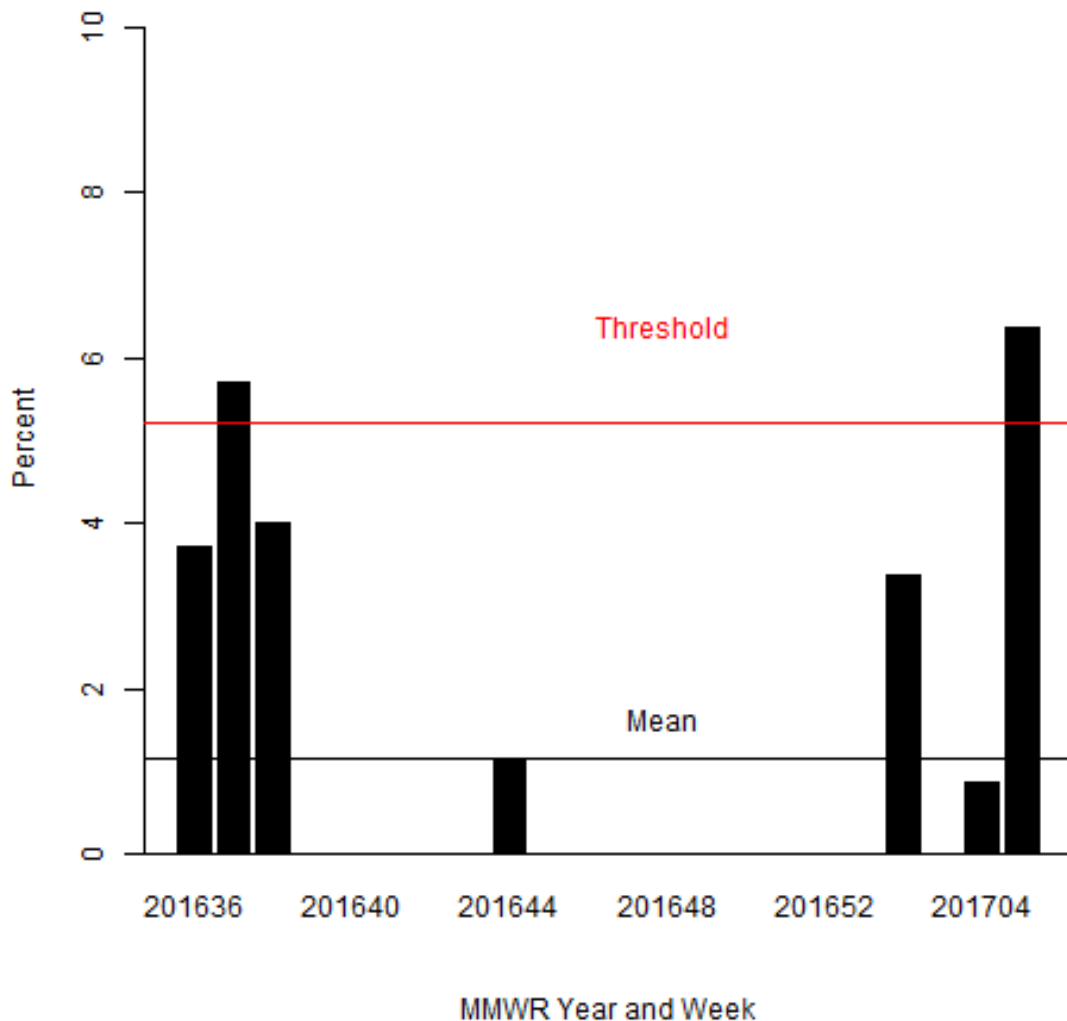


Crowd sourced reports for ILI represent individuals who have symptoms for ILI ranging in severity and may or may not have accessed the healthcare system. This form of public health surveillance complements other surveillance for ILI activity in that it may provide information for earlier detection of increased ILI activity. Flu Near You platform provides data collected via participatory surveillance. See the last page to learn how to participate.

From January 29 to February 4, 2017, ILI was reported by 6.4% of 63 Flu Near You participants.

The highest percent of ILI (6.4%) reported to Flu Near You occurred from January 29 to February 4, 2017.

Figure. Participatory surveillance from Flu Near You: Weekly percent of ILI, 2016-2017





Flu activity in school settings

The Houston Independent School District collects data on student ILI and influenza cases from 286 schools. Schools will be counted more than once if more than one case from the same school is reported during the month. This data is reported every two weeks.

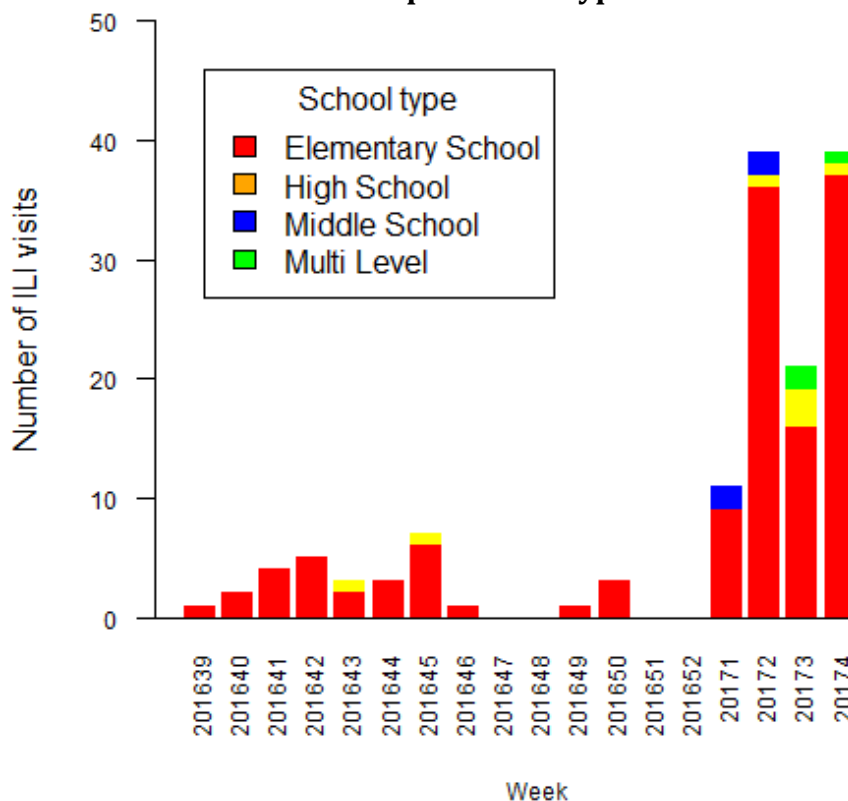
From January 22 to January 28, 2017, ILI was reported by 39 students in in school settings. The school type that accounted for the highest count(s) was Elementary Schools with 11 students.

The highest count of ILI (39) in school settings occurred from January 1 to 7, 2017 and January 22 to 28, 2017.

Table .Summary of ILI activity per week in school settings

Date range		Influenza Like Illness
Date	MMWRYrWk	HISD (counts per week)
November 27 to December 3, 2016	201648	0
December 4 to 10, 2016	201649	1
December 11 to 17, 2016	201650	3
December 18 to 24, 2016	201651	0
December 25 to 31, 2016	201652	0
January 1 to 7, 2017	201701	11
January 8 to 14, 2017	201702	39
January 15 to 21, 2017	201703	21
January 22 to January 28, 2017	201704	39

Figure. Total number of ILI visits per school type





Influenza type

Test performed at the Houston Health Department (HHD)

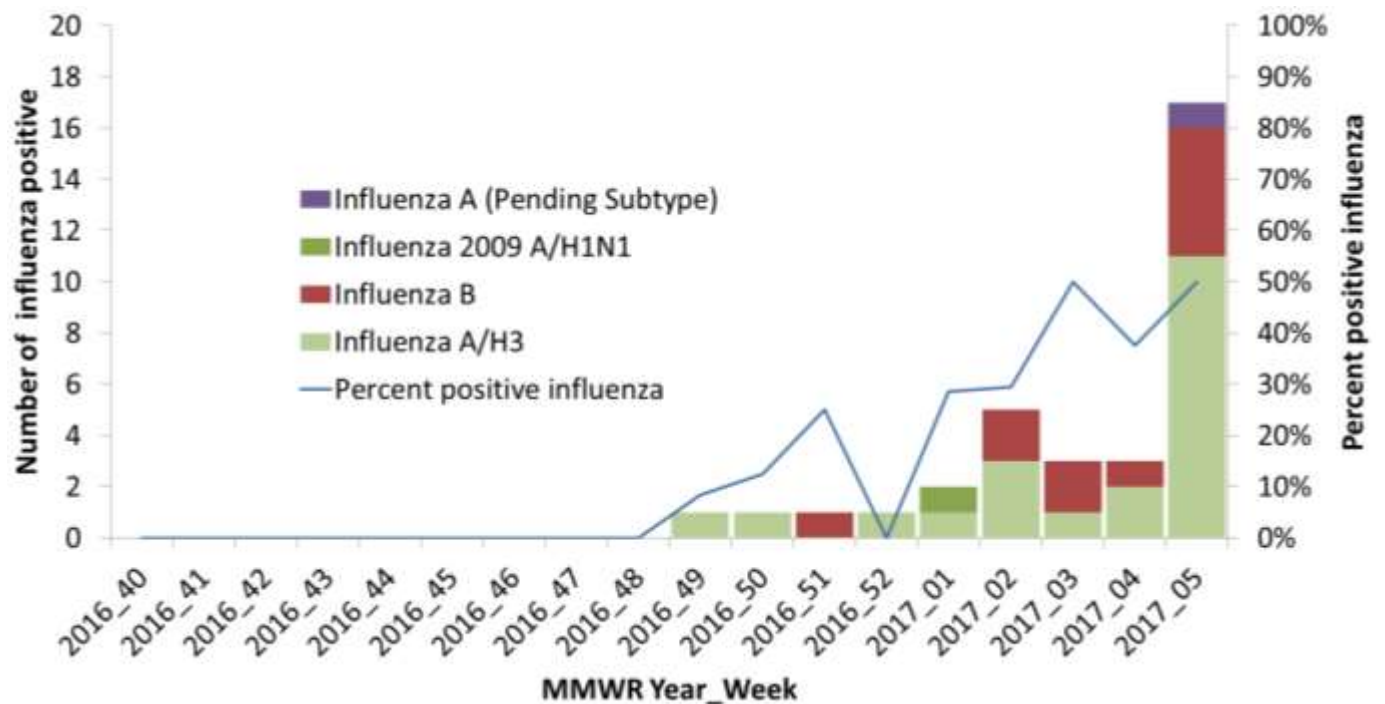
Influenza viral surveillance summary

During the 2016-2017 flu season HHD tested 113 specimens from sentinel providers and detected 30% flu positives out of the total number of specimens tested. Out of the 34 influenza positives the following influenza viruses have been detected: Influenza A/H3 (21), Influenza B / Yamagata (9), Influenza B / Victoria (2), and Influenza pdm2009 (1).

From January 29 to February 4, 2017, influenza positives accounted for 50% of the specimens tested.

The highest percent of influenza positives (50%) occurred from January 15 to 21, 2017 and January 29 to February 4, 2017.

Figure. Sentinel providers: Influenza positive specimens detected





Non-influenza respiratory virus surveillance

During the 2016-2017 season, among the specimens tested by culture or respiratory virus panel, the following non-influenza viruses were detected:

Table. Sentinel providers: Number of respiratory virus type per week

Respiratory Virus	Year											
	2016						2017					
	MMWR Week											
	46	47	48	49	50	51	52	1	2	3	4	5
Coinfection					2			1	1			1
Human Rhinovirus		3	2	1	1	1			2		2	1
Parainfluenza 1												
Parainfluenza 2	1											
Parainfluenza 3			1			1						
RSV			1	2	1		1		1			
Adenovirus		1									1	3
hMPV												



Tests performed by clinical labs

HHD receives reports of flu positives from clinical labs.

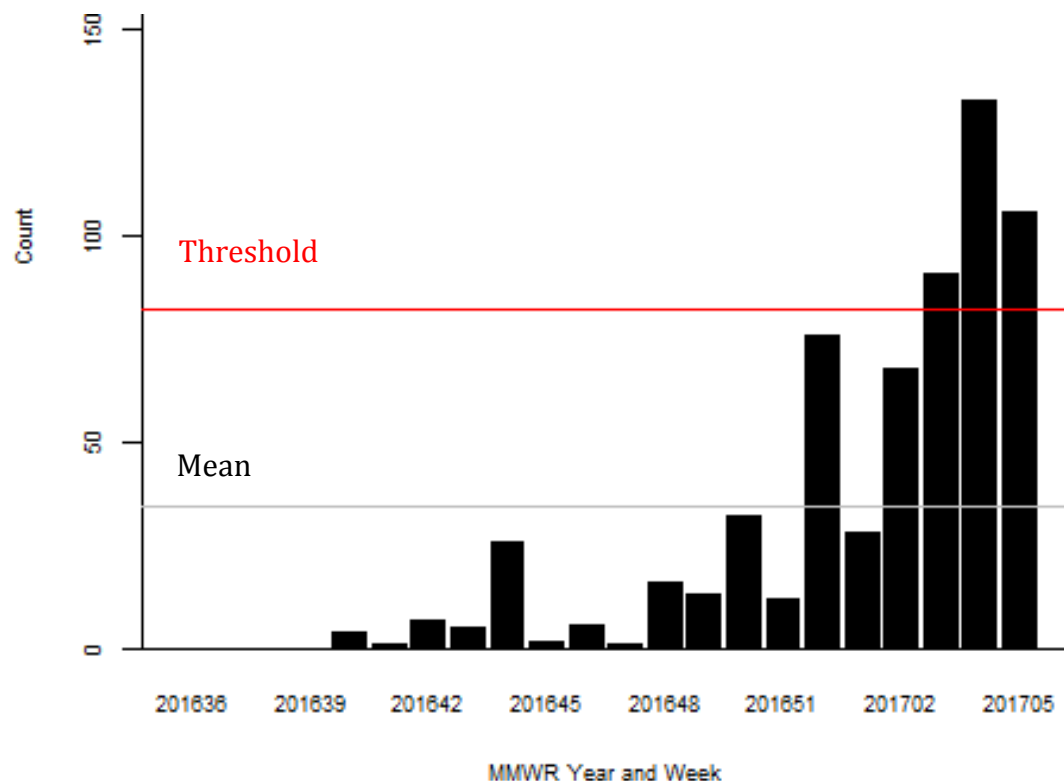
Table. Summary of Influenza positives per week from clinical labs

Date range		Influenza positives from clinical labs	
Date	MMWRYrWk	Electronic Lab Reports (Counts per week)	Non-Electronic Lab Reports (Counts per week)
November 27 to December 3, 2016	201648	0	16
December 4 to 10, 2016	201649	0	13
December 11 to 17, 2016	201650	0	32
December 18 to 24, 2016	201651	0	12
December 25 to 31, 2016	201652	0	76
January 1 to 7, 2017	201701	0	28
January 8 to 14, 2017	201702	0	68
January 15 to 21, 2017	201703	1	91
January 22 to January 28, 2017	201704	NA	133
January 29 to February 4, 2017	201705	NA	106

Non-electronic lab reports from clinical laboratories are reported to HHD.

Cumulatively this season, flu A activity accounts for 73% of reported lab results. The highest count (133) of flu positives this season occurred between January 22 to 28, 2017.

Figure. Count of influenza positive labs reported via non-Electronic lab reports





Prevention and Control

Note: For the 2016-2017 season, CDC recommends use of the flu shot (inactivated influenza vaccine or IIV) and the recombinant influenza vaccine (RIV). The nasal spray flu vaccine (live attenuated influenza vaccine or LAIV) should not be used during 2016-2017. The 2016-2017 influenza vaccination recommendations are now available.

Additional information regarding Houston, Texas and national ILI activity can be accessed at: <http://www.houstontx.gov/health/>
<http://www.dshs.state.tx.us/idcu/disease/influenza/surveillance/2015/>
<http://www.cdc.gov/flu/weekly/>
<http://www.who.int/csr/don/en/>





Components

Seasonal influenza surveillance at the Houston Health Department consists of the following components: Influenza Like Illness, Virology, school settings, and influenza associated pediatric mortalities.

Influenza Like Illness

Influenza Like Illness activity is monitored with three types of data sources. The data sources for ILI consist of hospital emergency center visits, outpatient visits, and Flu Near You.

Hospital Emergency Center (EC) visits which include symptoms for ILI are obtained from hospital participating in syndromic surveillance on a real-time basis. The Houston/Harris County ILI activity is tracked and monitored based on chief complaint data. The number of healthcare providers reporting ILI information to Houston Health Department ranges from 30 to 40. These data do not represent laboratory confirmed cases of influenza nor do they represent all EC visits in Houston/Harris County.

Outpatient visits due to ILI are obtained from Athena and ILInet on a weekly basis. Please see the last page for information on how providers can participate in ILInet.

Flu Near You uses crowd sourcing to collect reports of ILI from the public. Reports of ILI are obtained from the Flu Near You platform on a weekly basis. In order to register, individuals must be 13 years of age or older Visit Flunearyou.org to get information on what is participatory surveillance and how you can participate.

Virology

Virology surveillance makes it possible to track and monitor the type and subtype of circulating viruses. Seasonal influenza is not reportable in Texas.

Public Health Laboratory Results

Influenza: Public health labs test respiratory specimens for seasonal and novel influenza types and subtypes that are circulating. Weekly percent of flu positives by subtype are reported.

Non influenza viruses: The Bureau of Laboratory Services tests respiratory specimens with culture or respiratory virus panel to determine the occurrence of non-influenza respiratory viruses. Weekly count of respiratory viruses are reported.

Only specimens collected through active surveillance from participating sentinel providers are tested by the Bureau of Laboratory Services at Houston Health Department. The respiratory specimens are collected, tested and results reported on a weekly basis by the Houston Health Department.



Clinical Laboratory Results

Electronic Lab Results: Houston Health Department receives electronic lab reports (ELR) from clinical laboratories to determine the type (Flu A or Flu B) of flu circulating. The type of clinical lab usually consist of hospital labs. The number of clinical laboratories that transmit ELR flu positives varies from week to week. Flu positives are transmitted to HHD on a daily basis. Flu positives from clinical lab are reported as number of flu positives by type per week.

Non Electronic Lab Results: Houston Health Department receives non-electronic lab reports of flu positive results from clinical laboratories via paper reports to determine the type of flu circulating among individuals that obtained care in outpatient settings. The number of clinical laboratories that send in paper reports of flu positives varies from week to week. Flu positives are reported to HHD on a daily basis. Flu positives from clinical lab are reported as number of flu positives by type per week.

Pediatric Mortalities

Influenza associated pediatric mortality is a reportable condition in Texas. Reports of *confirmed* pediatric mortalities are received from the Harris County Forensic Institute. Reports of *suspected* influenza associated pediatric mortalities should be immediately reported to the Houston Health Department.



Announcements

Healthcare providers can become ILINet Providers. An ILINet provider conducts surveillance for influenza-like illness (ILI) in collaboration with the Texas Department of State Health Services and the Centers for Disease Control and Prevention (CDC). Data reported by ILINet providers are combined with other surveillance data to provide a national picture of influenza virus and ILI activity in the U.S.

ILINet providers receive feedback on the data submitted, summaries of regional and national influenza data, and preliminary information via email and letters.

For more information about the ILINet Program visit

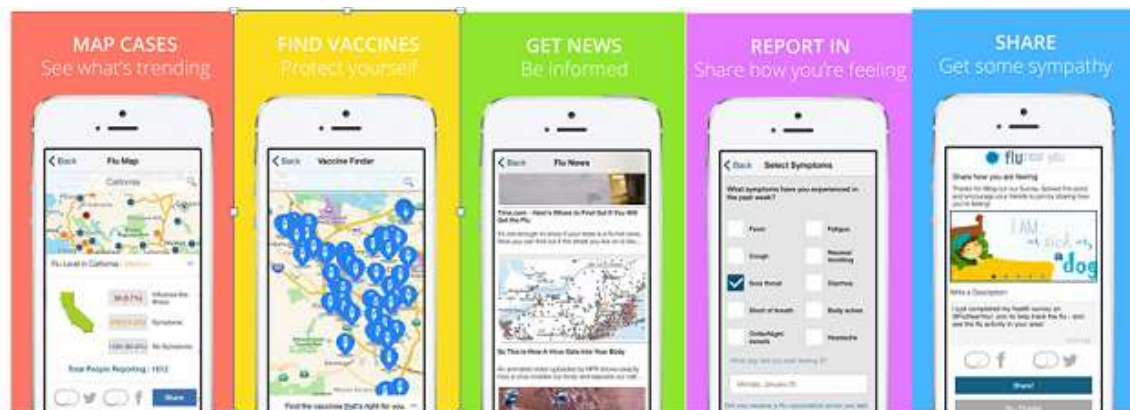
<http://www.dshs.state.tx.us/idcu/disease/influenza/surveillance/ILINet/>

Flu Near You Flu Near You is a participatory surveillance (crowd sourcing) tool which complements traditional disease surveillance activities. Registered users can obtain real-time information on flu activity and influenza vaccines in the Greater Houston Metropolitan Area. Flu Near You features include:

- Report symptoms
- Find vaccines
- Map flu cases in the Greater Houston Metropolitan area
- Get flu news
- Share on social media

This season HHD invites you to register for Flu Near You at <https://flunearyou.org>

Flu Near You has several ways to register. Users can register on the website, obtain the mobile application or join via Facebook. In order to register, individuals must be 13 years of age or older. During the registration process users are asked to provide their email, gender, birthdate, and ZIP code. Once registered, users receive a weekly email or push notification to report symptoms. They also get real-time information on flu activity.





Contact Information



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The Houston Seasonal Influenza Surveillance Weekly Report is available on the Houston Health Department web site [here](#).